

positions and orientations;

and further comprising means in the second apparatus or in a third apparatus for generating data defining an image of the three-dimensional computer model showing the selected part of the subject object using a viewing camera defined relative to the stored calibration pattern.

5 10 15 20 25 56. Apparatus for generating data defining a three-dimensional computer model of a subject object and data defining a viewing camera for the three-dimensional computer model to show a predetermined part of the subject object, comprising:

means for receiving image data defining images of a subject object together with a calibration pattern recorded at different relative recording positions and orientations, the subject object being positioned relative to the calibration pattern so that a selected part of the subject object which is to appear in an image of the three-dimensional computer model generated using the viewing camera faces in a predetermined direction relative to the calibration pattern;

means for processing the image data to calculate the relative positions and orientations at which the images were recorded by comparing the calibration pattern in the

images with stored data defining the calibration pattern; means for generating data defining a three-dimensional computer model of the subject object relative to the stored calibration pattern using the calculated positions and orientations; and

means for generating data defining a viewing camera for the three-dimensional computer model for generating image data showing the selected part of the subject object in dependence upon the stored calibration pattern.

57. Apparatus for generating data defining a three-dimensional computer model of a subject object for rendering by a predetermined viewing camera to show a predetermined part of the subject object, comprising:

means for receiving image data defining images of a subject object together with a calibration pattern recorded at different relative recording positions and orientations, the subject object being positioned relative to the calibration pattern so that a selected part of the subject object which is to appear in an image of the three-dimensional computer model generated using the viewing camera faces in a predetermined direction relative to the calibration pattern;

means for processing the image data to calculate the relative positions and orientations at which the images

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were recorded by comparing the calibration pattern in the images with stored data defining the calibration pattern relative to the predetermined camera viewing position and direction; and

5 means for generating data defining a three-dimensional computer model of the subject object relative to the stored calibration pattern using the calculated positions and orientations.

10 58. A system for recording images of a subject object, for processing the image data to generate data defining a three-dimensional computer model of the subject object, and for displaying an image to show a predetermined part of the subject object, comprising:

15 a calibration pattern having a position or direction defined relative thereto; and

processing means comprising:

20 means for processing data defining images of the subject object and calibration pattern recorded from different relative recording positions and orientations to calculate the relative positions and orientations at which the images were recorded by comparing the calibration pattern in the images with stored data defining the calibration pattern;

25 means for generating data defining a three-